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THBD Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22242a

Product Information

Application	WB, FC, IF, E
Primary Accession	P07204
Other Accession	Q71U07
Reactivity	Human, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB56919
Calculated MW	60329

Additional Information

Gene ID	7056
Other Names	Thrombomodulin, TM, Fetomodulin, CD141, THBD, THRM
Target/Specificity	This THBD antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 92-126 amino acids from human THBD.
Dilution	WB~~1:2000 FC~~1:25 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	THBD Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	THBD
Synonyms	THRM
Function	Endothelial cell receptor that plays a critical role in regulating several physiological processes including hemostasis, coagulation, fibrinolysis, inflammation, and angiogenesis (PubMed:10761923). Acts as a cofactor for thrombin activation of protein C/PROC on the surface of vascular endothelial

cells leading to initiation of the activated protein C anticoagulant pathway (PubMed:29323190, PubMed:33836597, PubMed:9395524). Also accelerates the activation of the plasma carboxypeptidase B2/CPB2, which catalyzes removal of C-terminal basic amino acids from its substrates including kinins or anaphylatoxins leading to fibrinolysis inhibition (PubMed:26663133). Plays critical protective roles in changing the cleavage specificity of protease-activated receptor 1/PAR1, inhibiting endothelial cell permeability and inflammation (By similarity). Suppresses inflammation distinctly from its anticoagulant cofactor activity by sequestering HMGB1 thereby preventing it from engaging cellular receptors such as RAGE and contributing to the inflammatory response (PubMed:15841214).

Cellular Location Membrane; Single-pass type I membrane protein.

Tissue Location Endothelial cells are unique in synthesizing thrombomodulin

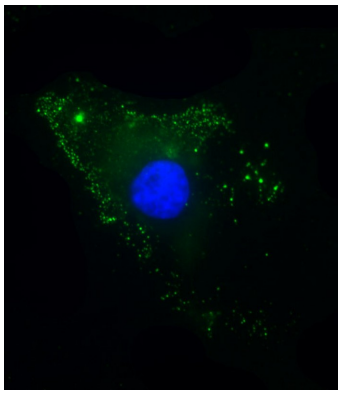
Background

Thrombomodulin is a specific endothelial cell receptor that forms a 1:1 stoichiometric complex with thrombin. This complex is responsible for the conversion of protein C to the activated protein C (protein Ca). Once evolved, protein Ca scissions the activated cofactors of the coagulation mechanism, factor Va and factor VIIIa, and thereby reduces the amount of thrombin generated.

References

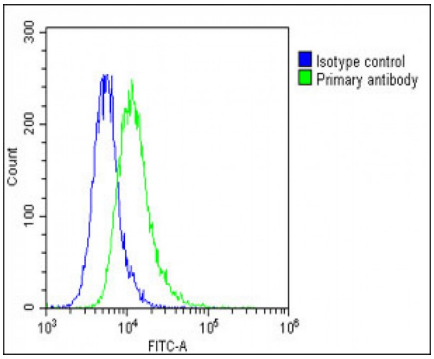
Suzuki K.,et al.EMBO J. 6:1891-1897(1987).
Wen D.,et al.Biochemistry 26:4350-4357(1987).
Jackman R.W.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:6425-6429(1987).
Shirai T.,et al.J. Biochem. 103:281-285(1988).
Deloukas P.,et al.Nature 414:865-871(2001).

Images

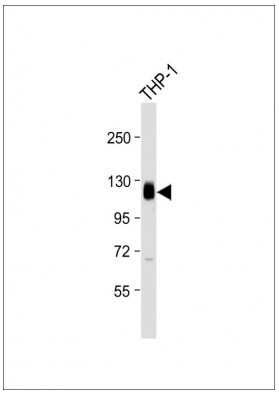


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized A549 cells labeling THBD with AP22242a at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-Rabbit IgG (OH191631) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing membrance staining on A549 cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (1186255) at 1/500 dilution (red). The nuclear counter stain is DAPI (blue).

Overlay histogram showing A549 cells stained with AP22242a(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22242a, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly



Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Anti-THBD Antibody (N-Term) at 1:2000 dilution + THP-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 60 kDa Blocking/Dilution buffer: 5% NFDM/TBST.